

WHAT IS CLAIMED IS:

1. A flat panel display comprising:
 - a front glass plate;
 - a rear glass plate;
 - a layer of liquid crystals interposed between said front and rear glass plates;
 - a TFT array layer interposed between said front and rear glass plates; and
 - at least one thermal sensor integral to said TFT array layer.
2. A flat panel display according to claim 1, wherein said thermal sensor is applied onto said TFT array layer.
3. A flat panel display according to claim 1, wherein said at least one thermal sensor is comprised of an array of diodes.
4. A flat panel display according to claim 1, wherein said at least one thermal sensor is interposed between said front and rear glass plates to provide timely temperature sensing of said layer of liquid crystals.
5. A flat panel display according to claim 1, further comprising:
 - an EMI layer interposed between said front and rear glass plates.
6. A flat panel display according to claim 5, wherein said at least one thermal sensor lies under said EMI layer.
7. A flat panel display according to claim 5, wherein said EMI layer is a black mask EMI layer.
8. A flat panel display according to claim 1, wherein said thermal sensor is comprised of diode array that provides a nominal 2.5 volt to 5.0 volt change in bias potential as the liquid crystal temperature changes from – 60 degrees Celsius to 100 degrees Celsius.

9. A flat panel display comprising:
 - a front plate;
 - a rear plate;
 - a layer of liquid crystals interposed between said front and rear plates;
 - a TFT array layer interposed between said front and rear plates; and
 - at least one thermal sensor integral to said TFT array layer.
10. A flat panel display according to claim 9, wherein said thermal sensor is applied onto said TFT array layer.
11. A flat panel display according to claim 9, wherein said at least one thermal sensor is comprised of an array of diodes.
12. A flat panel display according to claim 9, wherein said at least one thermal sensor is interposed between said front and rear plates to provide timely temperature sensing of said layer of liquid crystals.
13. A flat panel display comprising:
 - a front plate;
 - a rear plate;
 - a layer of liquid crystals interposed between said front and rear plates; and
 - at least one thermal sensor interposed between said front and rear plates to provide temperature sensing of said layer of liquid crystals.
14. A flat panel display according to claim 13, wherein said at least one thermal sensor is comprised of an array of diodes.

15. A flat panel display according to claim 13, further comprising:
 - a TFT array layer interposed between said front and rear plates,
 - wherein said at least one thermal sensor is integral to said TFT array layer.
16. A flat panel display according to claim 15, wherein said at least one thermal sensor is applied onto said TFT array layer.